

**ABSTRACT OF THE DISCLOSURE**

There is provided an apparatus (LCPA) for measuring a load applied to a quantity of material. The LCPA includes a load cell assembly sandwiched between an inner plate and an outer plate. The load cell assembly measures the load applied to the quantity of material when a force is exerted against the outer plate. Preferably, the load cell assembly includes three equally spaced apart load cells. In one aspect, the LCPA is a part of a gyratory compactor such that the LCPA measures the load applied to a paving material test specimen when a ram exerts a force against the outer plate during the compaction and gyration process. In one aspect, the location of the resultant force exerted by the ram on the specimen is calculated so that the performance of the test specimen may be evaluated. In one aspect, the shear resistance of the specimen is calculated based in part on the location of the resultant force so that a prediction can be made as to whether a particular paving material is suitable for actual field applications.

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